

WHAT IS CLAIMED:

1. A process for transmitting status messages to user terminals of a satellite data transmission system that transmits data formed as navigation blocks, comprising:

reserving at least one selected data area in the navigation data blocks;

splitting status messages into status data blocks that are smaller than the navigation data blocks;

inserting the status data blocks into consecutive reserved data areas of the navigation data blocks; and

inserting, when the status messages are modified, modification message data blocks into subsequent reserved data areas of the navigation data blocks in place of one or more status data blocks of the status messages.

2. The process in accordance with claim 1, wherein the satellite data transmission system transmits the navigation data blocks from navigation satellites to the user terminals.

3. The process in accordance with claim 1, wherein the reserving of the at least one data area comprises reserving at least one data area in each navigation block in a regular sequence.

4. The process in accordance with claim 1, wherein the at least one reserved data area comprises a plurality of reserved data areas a navigation data block.

5. The process in accordance with claim 4, wherein the status data blocks in the reserved data areas account for a maximum of 25% of a total data volume of the navigation data block.

6. The process in accordance with claim 4, wherein the status data blocks in the reserved data areas account for a maximum of 25% of an entire data content of the navigation data block.

7. The process in accordance with claim 1, wherein the modification message is inserted into the reserved data areas of the navigation data blocks within a pre-defined update time frame.

8. The process in accordance with claim 1, wherein the status messages are composed of integrity messages concerning navigation satellites of a satellite navigation system, and the modification messages are provided when a modification of the integrity messages occurs.

9. The process in accordance with claim 8, wherein the integrity messages are modified when integrity information changes.

10. The process in accordance with claim 8, wherein the integrity messages are composed of information related to integrity of the transmitting navigation satellite or integrity of a selected group of navigation satellites of the satellite navigation system to which the transmitting navigation satellite belongs or integrity of all the navigation satellites of the satellite navigation system to which the transmitting navigation satellite belongs.

11. The process in accordance with claim 10, wherein the integrity messages are further composed of information related to integrity of navigation satellites of other satellite navigation systems.

12. The process in accordance with claim 8, wherein the integrity messages are composed of information related to integrity of navigation satellites of other satellite navigation systems.

13. The process in accordance with claim 8, wherein the status messages are further composed of at least one of distress calls and information for distress call devices.

14. The process in accordance with claim 8, wherein the inserting of the modification message into the navigation data blocks occurs within a defined alarm time of the satellite navigation system or a fraction of a defined alarm time of the satellite navigation system, in which the alarm time is defined for status message broadcasts.

15. The process in accordance with claim 1, wherein the status messages are composed of at least one of distress calls and information for distress call devices.

16. A user terminal for a satellite data transmission system comprising:
a receiver unit; and
a data processing unit structured for receiving and processing navigation data blocks transmitted from a satellite data transmission system to process status messages transmitted in accordance with the process of claim 1.

17. The user terminal in accordance with claim 16, wherein said user terminal is structured and arranged as a terminal of a radio communications system.

18. A user terminal for a satellite data transmission system comprising:
a first receiver unit;
a first data processing unit structured for receiving and processing navigation data blocks transmitted from a satellite data transmission system to process status messages transmitted in accordance with the process of claim 1;
a second receiver unit; and
a second data processing unit structured and arranged for receiving and processing user data blocks of a radio communications system.

19. A computer readable medium for processing navigation data blocks transmitted from a satellite data transmission system to process status messages transmitted in accordance with the process of claim 1.

20. A computer readable medium for processing navigation data blocks that is coupled to interact with the user terminal of claim 16.

21. The computer readable medium in accordance with claim 20, comprising a machine readable data carrier for storing data, in the form of electronically readable driving signals, for processing the navigation data blocks.

22. A process for transmitting status messages to user terminals of a satellite data transmission system that transmits user data blocks from satellites to the user terminals, comprising:

reserving a plurality of data areas in the user data blocks;

splitting the status messages into status data blocks that are smaller than the user data blocks;

inserting the status data blocks into consecutive reserved data areas of the user data blocks; and

inserting, when there is a modification of the status messages, modification message data blocks into subsequent reserved data areas of the user data blocks in place of one or more status data blocks.

23. A process for transmitting data from satellite, comprising:

forming navigation data blocks for transmission;

reserving at least one selected data area in each navigation data block;

splitting status messages into status data blocks that correspond to the size of the at least one reserved data area; and

inserting the status data blocks into consecutive reserved data areas of the navigation data blocks.

24. The process in accordance with claim 23, further comprising:

inserting, when the status messages are modified, modification message data blocks into subsequent reserved data areas of the navigation data blocks in place of one or more status data blocks of the status messages.

25. An apparatus for communicating status information between at least one satellite and a user terminals, comprising:

a receiver unit receiving transmitted data blocks; and

a data processing unit structured for reading status data inserted into the transmitted data blocks and for storing the status data as status information.